Input Screening: Finding the Important Inputs on a Budget

Max Morris

Department of Statistics
Iowa State University, Iowa
mmorris@iastate.edu (E-mail)

Abstract

The general goal of sensitivity or uncertainty analysis is the determination of which inputs most influence model outputs of interest. Simple methodologies based on randomly sampled input values are attractive because they require few assumptions about the nature of the model. However, when the number of inputs is large and the computational effort required per model evaluation is significant, techniques based on more complex assumptions or sampling plans may be needed. This talk will review some approaches that have been proposed for input screening, with an emphasis on the balance between assumptions and economy, including a brief description of recent work in economical sampling plans.